SEQUENCE LISTING

<110> Mitsuhashi, Kazuya
      Yamamoto, Hiroaki
      Matsuyama, Akinobu
      Tokuyama, Shinji

<120> D-AMINOACYLASE AND GENE ENCODING THE SAME

<130> 06501-072001

<140> US 09/770,517
<141> 2001-01-26

<150> JP 2000-019080
<151> 2000-01-27

<150> JP 2000-150578
<151> 2000-05-22

<160> 27

<170> PatentIn Ver. 2.0

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<213> Hypomyces mycophilus

<400> 1
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ccaattcgta atgtagacca gttgagggcg atccgagaac agattgctgg atggaatggc  360
aatcctacag atgaggagtg ccggacaact ctcaaaggcg ttggcatgtt tgaatggcag  420
actattgggg aatacttgga ttgtttggag agaaacagga cggccactaa tgtcgccatg  480
ttggttccgc aaggcaacct gagattattg gcatgtggcc catacgatac tccagcatct  540
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<210> 2
<211> 558
<212> PRT
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<400> 2

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                20                  25                  30
Ile Ala Lys Ile Gly Asn Pro Gly Ser Ile Asn Ala Thr Pro Asp Thr
            35                  40                  45
Arg His Leu Asp Val Thr Gly Tyr Ile Leu Ser Pro Gly Phe Ile Asp
        50                  55                  60
Met His Ala His Ser Asp Leu Tyr Leu Leu Ser His Pro Asp His Glu
65                  70                  75                  80
Ala Lys Ile Thr Gln Gly Cys Thr Thr Glu Val Val Gly Gln Asp Gly
                85                  90                  95
Ile Ser Tyr Ala Pro Ile Arg Asn Val Asp Gln Leu Arg Ala Ile Arg
                100                 105                 110
Glu Gln Ile Ala Gly Trp Asn Gly Asn Pro Thr Asp Glu Glu Cys Arg
            115                 120                 125
Thr Thr Leu Lys Gly Val Gly Met Phe Glu Trp Gln Thr Ile Gly Glu
        130                 135                 140
Tyr Leu Asp Cys Leu Glu Arg Asn Arg Thr Ala Thr Asn Val Ala Met
145                 150                 155                 160
Leu Val Pro Gln Gly Asn Leu Arg Leu Leu Ala Cys Gly Pro Tyr Asp
                165                 170                 175
Thr Pro Ala Ser Ala Glu Glu Ile Gln Asp Gln Ile Gln Leu Leu Arg
                180                 185                 190
Glu Ala Met Ala Gln Gly Ala Val Gly Met Ser Ser Gly Leu Thr Tyr
            195                 200                 205
Thr Pro Gly Met Tyr Ala Ser Thr Ser Glu Leu Ala Ser Leu Cys Ala
        210                 215                 220
Ala Leu Ala Gln Glu Phe Pro Gly Ala Phe Tyr Ala Pro His His Arg
225                 230                 235                 240
Ser Tyr Gly Phe Gln Ala Ile Glu Ser Tyr Ala Glu Met Leu Asp Leu
                245                 250                 255
Gly Glu Ser Thr Gly Cys Pro Ile His Leu Thr His Ala Thr Leu Asn
                260                 265                 270
Phe Ser Glu Asn Lys Gly Lys Ala Pro Val Leu Ile Ser Met Val Asp
            275                 280                 285
Lys Ser Leu Ala Ala Gly Val Asp Val Thr Leu Asp Thr Tyr Pro Tyr
290                 295                 300
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Leu Pro Gly Cys Thr Thr Leu Ala Ala Leu Leu Pro Ser Trp Ala Ser
305                 310                 315                 320
Ala Gly Gly Pro Gln Glu Thr Leu Lys Arg Leu Glu Asp Ala Glu Ser
            325                 330                 335
Arg Glu Lys Ile Arg Ile Ala Val Glu Ile Lys Gly Cys Asp Gly Gly
            340                 345                 350
His Gly Ile Pro Thr Asn Trp Asp Glu Ile Gln Ile Gly Thr Thr Asn
            355                 360                 365
Glu Pro Ser Ile Ala Ser Tyr Ser Gly Arg Arg Leu Ser Glu Val Ala
            370                 375                 380
Gln Ser Val Gly Lys Pro Thr Ile Glu Val Phe Phe Glu Ile Leu Gln
385                 390                 395                 400
Lys Asp Lys Leu Ala Thr Ser Cys Ile Met His Val Gly Asn Glu Glu
                405                 410                 415
Asn Val Arg Gln Ile Met Gln His Arg Val His Met Ala Gly Ser Asp
            420                 425                 430
Gly Ile Leu His Gly Gln Thr Leu His Pro Arg Ala Tyr Gly Thr Phe
            435                 440                 445
Thr Arg Tyr Leu Gly His Tyr Ser Arg Glu Leu Ser Leu Val Ala Leu
            450                 455                 460
Pro Ser Met Ile Ala His Leu Thr Ser Arg Pro Ala Lys Arg Leu Ser
465                 470                 475                 480
Val Tyr Pro Tyr Arg Gly Leu Ile Ala Glu Gly Ser Ala Ala Asp Ile
                485                 490                 495
Val Val Phe Asn Pro Glu Thr Val Lys Asp Met Ser Thr Tyr Glu Glu
                500                 505                 510
Pro Lys Val Pro Ser Arg Gly Ile Arg Phe Val Leu Val Asn Gly Gln
            515                 520                 525
Ile Ala Val Asp Glu Gly Lys Met Thr Gly Thr Arg Gly Gly Lys Thr
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Leu Arg Arg Ser Thr Asp Gly Lys Val Lys Ala Arg Asp Glu
545                 550                 555
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<210> 3
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 3
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<210> 4
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

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<221> misc_feature
<222> 18
<223> n = A,T,C or G

<400> 4
ttcatcgaca tgcaygcnca                                                      20

<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<221> misc_feature
<222> 3, 6, 15
<223> n = A,T,C or G

<400> 5
tgnggngcrt craangcytg                                                      20

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<221> misc_feature
<222> 3, 9
<223> n = A,T,C or G

<400> 6
aangcytgng grtaytcrtc                                                      20

<210> 7
<211> 321
<212> DNA
<213> Hypomyces mycophilus

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cgaagagctg gagctacatg gcctggcaat gccgaacctg ggcagtataa acgagcaatc  180
catcgccggc gccatatcta caggcacaca cggcagcagc atccaccacg gcctcatgtc  240
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<210> 8
<211> 20
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<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 8
aggccaaaat cacccaagga   20

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 9
attggggaat acttggattg   20

<210> 10
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 10
ctggttcttt ccgcctcaga   20

<210> 11
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 11
attaaccctc actaaagggc   20

<210> 12
<211> 1325
<212> DNA
<213> Hypomyces mycophilus

<400> 12
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agaggctatg gctcagggtg ctgtcgggat gtctagtggt ctcacttata cacccggcat 180
gtatgcttcc acgtcggaac tagcttctct gtgcgcggcc ctcgcacaag aatttccagg 240

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tgcattctat gcgccacatc atagaagtta tgggttccag gccatcgaaa gttatgccga   300
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ccatggtatt ccaaccaact gggacgaaat ccagatcggg acgactaatg aaccatcaat   660
cgcatcgtat tctggtcgca ggctatcaga agtggcacag tctgttggaa agccgaccat   720
cgaagtcttt ttcgagattc tgcaaaagga taagctcgca acgagctgta tcatgcatgt   780
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caata                                                              1325
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<210> 13
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<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 13
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<210> 14
<211> 20
<212> DNA
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<220>
<223> Artificially Synthesized Primer Sequence

<400> 14
cgcaggctat cagaagtggc                                                20


<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 15
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<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 16
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<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 17
gattttggcc tcgtggtcag                                          20

<210> 18
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 18
cctcagtgga tgttgccttt ac                                       22

<210> 19
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 19
gcctgtacgg aagtgttact                                          20

<210> 20
<211> 253
<212> DNA
<213> Hypomyces mycophilus

<400> 20
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atcgccggtg ataacagtgg ctgagtggaa gagaatttca gtccgcatcg ttggcaatgg 240
gaattcttct ggt   253

<210> 21
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 21
gagaagctta cagaattctc tccattattg ac   32

<210> 22
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 22
gagaagctta ccagaagaat tcccattgcc   30

<210> 23
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 23
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<210> 24
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificially Synthesized Primer Sequence

<400> 24
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<210> 25
<211> 1897
<212> DNA

<213> Hypomyces mycophilus

<400> 25

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<211> 25
<212> PRT
<213> Hypomyces mycophilus

<400> 26
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Leu Tyr Leu Leu Ser His Pro Thr His
            20                  25
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<210> 27
<211> 20
<212> PRT
<213> Hypomyces mycophilus

<400> 27
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 1   5   10   15
Ser Arg Gly Phe
            20